



PEER INFLUENCE AS A PREDICTOR OF SUBSTANCE ADDICTION AMONG SECONDARY SCHOOL STUDENTS IN EDO STATE, NIGERIA

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Abstract

This study examined peer influence as a predictor of substance addiction among secondary school students in Edo State, Nigeria. The study was motivated by the increasing prevalence of substance-related behaviours among adolescents and the need to understand the role of social factors in shaping such behaviours. A correlational research design was adopted for the study. The population comprised all secondary school students in the study area, from which a representative sample was selected using appropriate sampling techniques. Data were collected using a structured questionnaire based on a substance use/addiction scale, which measured students' exposure to and involvement in various psychoactive substances. The findings revealed that peer influence significantly predicts substance addiction among secondary school students. Students who are associated with peers who engage in substance use were more likely to exhibit addictive behaviours. The study also showed that peer pressure, modelling, and the desire for social acceptance were key mechanisms through which peer groups influenced substance-related behaviours. Based on the findings, it was concluded that peer influence plays a critical role in shaping substance addiction among adolescents. Therefore, the study recommends that school administrators and counsellors should implement peer-led intervention programmes and strengthen guidance and counselling services to help students develop resistance skills against negative peer pressure and reduce the incidence of substance addiction in secondary schools.

Keywords: Peer influence, substance addiction, adolescents, secondary school students, counselling, Nigeria

Introduction

Substance addiction among adolescents has emerged as a critical public health and social concern globally, with far-reaching implications for individual well-being, family stability, and national development. Recent reports by the United Nations Office on Drugs and Crime indicate a steady rise in substance use among young people, particularly in low- and middle-income countries where rapid urbanisation, unemployment, and weak regulatory systems create enabling environments for substance misuse. The 2023 World Substance Report highlights that adolescents are increasingly exposed to a wide range of psychoactive substances, including cannabis, opioids, amphetamines, and prescription substances, often with limited awareness of the associated health risks. This growing trend underscores the urgency of understanding the underlying factors that predispose young individuals to substance addiction, especially within vulnerable contexts.

In Nigeria, the situation reflects global patterns but is further compounded by unique socioeconomic and cultural dynamics. National data from the National Bureau of Statistics in collaboration with the United Nations Office on Drugs and Crime (2018) revealed that a significant proportion of substance users fall within the adolescent and young adult age bracket. Similarly, reports from the National Substance Law Enforcement Agency (2022) indicate increasing cases of substance-related offences among secondary school students and youths, suggesting early initiation into substance use. Commonly abused substances in Nigeria include cannabis, codeine-based cough syrups, tramadol, and other locally available stimulants. The accessibility and affordability of these substances, coupled with inadequate enforcement of substance control policies, contribute to their widespread use among adolescents.

Adolescence is a transitional developmental stage characterised by significant physical, psychological, and social changes (Akorede et al., 2021). According to developmental theorists such as Susan M. Sawyer and colleagues, this period involves identity exploration, increased emotional sensitivity, and a heightened desire for autonomy and social acceptance. These characteristics make adolescents particularly susceptible to external influences, especially from their peers. As adolescents spend more time interacting with friends and less under direct parental

supervision, peer groups become a central context for social learning and behavioural modelling. Within these groups, norms, attitudes, and behaviours, including substance use, can be transmitted and reinforced.

Peer influence operates through multiple mechanisms, including peer pressure, imitation, social reinforcement, and the desire for group acceptance. Trucco (2020) emphasises that peers play a crucial role not only in the initiation of substance use but also in its maintenance and escalation. Adolescents are more likely to experiment with substances if they perceive such behaviours as normative or desirable within their peer networks. In many cases, the need to conform or avoid social rejection overrides awareness of potential risks. This dynamic is particularly pronounced in school settings, where peer interactions are frequent and influential.

While other factors such as family structure, parenting style, socioeconomic status, and community environment are important determinants of adolescent behaviour, peer influence consistently emerges as one of the most immediate and powerful predictors of substance use. For instance, adolescents from stable family backgrounds may still engage in substance use if they are embedded in peer networks that normalise such behaviour. Conversely, strong peer support systems that promote positive behaviours can serve as protective factors against substance addiction. This dual role of peer influence highlights its complexity and the need for context-specific investigation.

In the context of secondary schools, the school environment serves as a critical arena where peer relationships are formed and reinforced. Schools are not only centres for academic learning but also social spaces where adolescents develop interpersonal skills, values, and behavioural patterns. However, exposure to deviant peer groups within the school setting can increase the likelihood of engaging in risky behaviours, including substance use. Factors such as bullying, academic pressure, low self-esteem, and the desire for social recognition may further intensify susceptibility to negative peer influence.

Despite the growing body of literature on adolescent substance use in Nigeria, there is a noticeable gap in empirical studies that specifically examine the role of peer influence in shaping substance addiction among secondary school students at the state level. In particular, Edo State has received limited scholarly attention in this regard, despite evidence suggesting the presence of youth-related social challenges, including substance abuse. Most existing studies have focused on national or regional data, thereby overlooking localised dynamics that may uniquely affect adolescents in specific communities.

Given this background, there is a compelling need to investigate how peer influence contributes to substance addiction among secondary school students in Edo State. Understanding this relationship is essential for the development of targeted interventions, school-based prevention programs, and policy frameworks aimed at reducing substance abuse among adolescents.

Objectives of the Study

The main objective of this study is to examine peer influence as a predictor of substance addiction among secondary school students in Edo State. Specifically, the study seeks to:

1. determine the level of peer influence and substance abuse among secondary school students in Edo State,
2. examine the extent to which peer influence predicts substance addiction among secondary school students in Edo State,
3. Investigate gender differences in substance addiction among secondary school students in Edo State.

Research Questions

1. What is the level of peer influence and substance abuse among secondary school students in Edo State?
2. To what extent does peer influence predict substance addiction among secondary school students in Edo State?
3. Are there gender differences in substance addiction among secondary school students in Edo State?

Hypotheses

Research question 1 was answered, while research questions 2 and 3 were hypothesised and tested at a 0.05 level of significance.

1. There is no relationship between peer influence and substance addiction among secondary school students in Edo State.
2. There is no significant difference between peer influence and substance addiction among secondary school students in Edo State based on gender.

Literature Review

Adolescent Substance Addiction

Adolescent substance addiction is marked by persistent and compulsive substance use even when the individual is aware of its negative physical, psychological, academic, or social consequences. Unlike experimental use, addiction involves loss of control, cravings, tolerance, and withdrawal symptoms. For adolescents, this pattern is particularly concerning because it unfolds during a critical period of brain development.

Some neurodevelopmental research, such as Casey *et al.* (2019); Dahl *et al.* (2018), explains why adolescents are especially susceptible to substance use disorders. During adolescence, the brain undergoes substantial structural and functional reorganisation, including synaptic pruning and myelination processes that refine neural efficiency. The prefrontal cortex, which governs executive functions such as impulse control, decision-making, planning, and risk evaluation, continues maturing into early adulthood (Steinberg, 2017). Because this regulatory system is still developing, adolescents may show reduced inhibitory control and heightened sensitivity to immediate rewards.

At the same time, the brain's reward circuitry, particularly dopaminergic pathways involving the nucleus accumbens and ventral striatum, demonstrates increased responsiveness to pleasurable and novel stimuli during adolescence (Volkow & Blanco, 2021; Silverman *et al.*, 2016). Braams *et al.* (2015) in their study revealed that adolescents exhibit stronger activation in reward-related regions compared to adults when exposed to risk-related cues. This heightened reward sensitivity, combined with immature cognitive control systems, creates what researchers describe as a developmental or "maturational gap" between motivational drives and self-regulatory capacity (Steinberg, 2017; Volkow & Blanco, 2021). This neurobiological imbalance increases vulnerability to experimentation with psychoactive substances and accelerates the transition from voluntary use to compulsive patterns, particularly when exposure occurs early and repeatedly (Grey & Squeglia, 2018).

As a result, adolescents are more likely to engage in risk-taking behaviours, including experimentation with psychoactive substances. Substances such as cannabis, opioids, alcohol, and stimulants directly affect neural circuits involved in reward processing. Repeated exposure during this sensitive developmental window can alter synaptic pruning and neural connectivity patterns. These changes may strengthen substance-related cues and weaken inhibitory control mechanisms, increasing vulnerability to compulsive use.

Early exposure further compounds this risk. Research shows that individuals who begin using substances in early adolescence are significantly more likely to develop substance use disorders in adulthood compared to those who initiate later (Gray & Squeglia, 2018). Early substance use is also associated with co-occurring mental health conditions, including depression, anxiety disorders, and conduct problems. The interaction between substance use and mental health can create a reinforcing cycle: substances may initially be used to cope with emotional distress, but over time, they exacerbate underlying psychological vulnerabilities.

Moreover, early addiction disrupts critical developmental milestones. Academic performance may decline due to impaired concentration and memory, as substance use negatively affects cognitive functioning and learning processes (Volkow *et al.*, 2016; Koob & Volkow, 2010). Social relationships can deteriorate, particularly when substance-seeking behaviour replaces normative peer engagement (Schulenberg *et al.*, 2019). In severe cases, early substance dependence is linked to long-term occupational instability, legal problems, and chronic health conditions (National Institute on Substance Abuse [NIDA], 2020).

Adolescent substance addiction is not simply a matter of poor choice or social influence alone; it is rooted in neurobiological vulnerability interacting with environmental factors. The ongoing maturation of executive control

systems, particularly in the prefrontal cortex, combined with a hypersensitive reward network, makes early exposure to substances especially dangerous (Steinberg, 2014; Giedd, 2015). This neurodevelopmental perspective underscores the urgency of prevention efforts targeted at adolescents before patterns of compulsive use become entrenched (National Institute on Substance Abuse [NIDA], 2020).

In Nigeria, cannabis, tramadol, codeine-containing cough syrups, and alcohol remain among the substances most frequently misused by adolescents (NDLEA, 2022; UNODC, 2023). Cannabis is widely accessible and often perceived by young people as relatively harmless, which lowers the psychological barrier to experimentation. Tramadol misuse has increased in recent years due to its availability in informal markets and its reputation among youths as a substance that enhances stamina, confidence, or social boldness. Similarly, codeine-containing syrups, once easily obtainable through pharmacies, gained popularity among adolescents for their sedative and euphoric effects before regulatory crackdowns were strengthened. Alcohol, though legally restricted for minors, remains socially accepted in many communities and is often introduced during social gatherings or celebrations, making early exposure common.

A study conducted by Odukoya *et al.* (2021) in southern Nigeria indicates that substance experimentation is increasingly being perceived as normal within certain adolescent peer groups. In these contexts, substance use is sometimes framed as a marker of maturity, resilience, or social belonging. Students may encounter substances through close friends, older peers, or neighbourhood groups connected to school environments. When influential members of a peer group engage in substance use without immediate visible consequences, others may interpret the behaviour as acceptable or even desirable.

This normalisation process operates subtly. It does not always involve overt pressure. Instead, it may emerge through shared narratives that minimise perceived risks, collective participation in experimentation, or the reinforcement of group identity around deviant behaviours. Adolescents who resist may fear social exclusion or ridicule, especially in tightly bonded peer clusters. Over time, repeated exposure to substance-using peers can shift individual attitudes, making experimentation appear routine rather than risky.

The combined effect of availability, shifting social norms, and peer reinforcement contributes to a pattern where substance use transitions from isolated experimentation to sustained misuse. Within secondary school settings, these dynamics underscore the importance of understanding peer structures and informal student networks when designing prevention strategies.

Peer Influence and Substance Use

Peer influence is a multifaceted social process that shapes adolescent behaviour through several interconnected mechanisms. It includes social modelling, where young people observe and imitate the behaviours of their friends; direct pressure, where peers explicitly encourage or persuade substance use; perceived norms, which involve beliefs about what behaviours are common or acceptable within a group; and reinforcement, where group approval strengthens continued engagement in certain behaviours. These mechanisms often operate simultaneously, making peer influence a powerful determinant of adolescent decision-making.

Brechwald and Prinstein (2019) draw an important distinction between direct peer pressure and indirect conformity to perceived peer norms. Direct peer pressure involves overt encouragement, teasing, or coercion to engage in substance use. In contrast, indirect conformity occurs when adolescents adjust their behaviour to align with what they believe their peers are doing or approving of, even without explicit prompting. This form of influence can be subtle but equally impactful, particularly when adolescents overestimate the prevalence of substance use within their social circles.

Adolescents are particularly sensitive to social evaluation and a sense of belonging. Research shows that when young people perceive substance use as a pathway to social acceptance, increased status, or group inclusion, they are more likely to experiment with substances or continue using them (Allen *et al.*, 2020). In this context, substance use may function as a social tool rather than merely an individual choice.

Trucco (2020) reports that adolescents who affiliate with substance-using peers are more likely to begin using substances and to increase both the frequency and intensity of use over time. Continued exposure reinforces favourable attitudes toward substances and reduces perceived risk, thereby normalising repeated use. In sub-

Saharan African contexts, peer influence often interacts with broader structural and environmental stressors. Doku *et al.* (2022) highlight how unemployment, rapid urbanisation, and expanding social media access can intensify adolescents' vulnerability to substance use. Economic hardship may limit opportunities for structured engagement, while urban environments may increase exposure to substance markets. Social media can amplify peer norms by showcasing substance use as trendy or desirable. These contextual factors can magnify peer-driven processes, creating a reinforcing cycle that heightens the risk of sustained substance involvement among adolescents (Shuaib *et al.*, 2021).

Theoretical Framework

This study is anchored in Bandura's (1977) Social Learning Theory, which provides a framework for how peer influence contributes to substance addiction among secondary school students in Edo State, Nigeria. Social Learning Theory proposes that behaviour is acquired and maintained through observation, imitation, and reinforcement within social environments. Individuals do not learn solely through direct experience; they also learn by watching others, especially those they consider important or similar to themselves.

In secondary schools in Edo State, peer groups serve as a primary social environment during adolescence. Students spend significant time interacting with classmates, forming close friendships, and negotiating social status. Within these peer networks, behaviours such as substance use can be observed, interpreted, and potentially imitated. When an adolescent sees peers using substances like cannabis, tramadol, or alcohol without immediate negative consequences, the behaviour may appear acceptable or even desirable.

According to Social Learning Theory, modelling plays a central role. Adolescents are more likely to imitate peers whom they perceive as popular, confident, or socially influential. If substance use is associated with perceived rewards, such as increased popularity, acceptance, or group belonging, the likelihood of imitation increases. In this way, peer influence becomes a predictive factor in the initiation of substance use.

Reinforcement further strengthens this process. Reinforcement may be direct, such as receiving praise, encouragement, or inclusion after engaging in substance use. It may also be indirect or vicarious, where students observe peers gaining social recognition or status through substance-related behaviours. Even subtle approval, such as laughter, attention, or invitations to social gatherings, can serve as powerful reinforcement. Over time, repeated reinforcement increases the probability that the behaviour will be sustained, potentially progressing from experimentation to habitual use and eventually addiction.

Social Learning Theory explains the mechanism through which peer influence operates as a predictor. It suggests that substance addiction does not emerge in isolation but develops within a social learning environment where behaviours are observed, imitated, and reinforced. In school settings where substance use is normalised within peer groups, students are more likely to internalise pro-substance attitudes and engage in repeated use. This repeated engagement, especially during a neurodevelopmentally vulnerable period, increases the risk of dependence.

Methodology

A cross-sectional survey design was employed. This allows for the collection of data from a population at a single point in time to examine relationships among variables (Creswell, 2014; Cohen, Manion, & Morrison, 2018).

Population of the Study

The population of the study comprised all secondary school students in public secondary schools in Edo State, Nigeria. According to records from the Edo State Ministry of Education (2023), there are approximately 100,590 students enrolled in public secondary schools across the state. This population includes students from both junior and senior secondary levels.

Sample and Sampling Techniques

A sample of 412 secondary school students aged 13–18 years was selected for the study. The sample size was considered adequate based on recommendations by Cochran (1977) and Krejcie and Morgan (1970), which suggest that a sample of about 384 is sufficient for large populations; thus, 412 was used to improve representativeness and account for possible non-response.

A multistage sampling technique was employed in selecting the sample. The procedure involved the following stages:

Stage 1: One senatorial district in Edo State was selected using simple random sampling.

Stage 2: From the selected senatorial district, 12 public secondary schools were selected using simple random sampling.

Stage 3: In each selected school, students were stratified by class level (e.g., JSS and SSS). Thereafter, a proportionate sampling technique was used to select respondents from each stratum, followed by simple random sampling to select the actual participants.

1. **Peer Influence Scale (Revised)** – Adapted from validated adolescent peer conformity measures (Brechwald & Prinstein, 2019).
2. **Adolescent Substance Use Screening Tool** – Adapted from WHO ASSIST guidelines (WHO, 2016). Reliability coefficients ranged from .82 to .88.

Data were analysed using descriptive and inferential statistical techniques. All analyses were conducted at a 0.05 level of significance.

For Research Question 1, which examined the level of peer influence and substance addiction among secondary school students in Edo State, descriptive statistics, including mean and standard deviation, were used. To interpret the magnitude of the mean scores, the following benchmark was adopted for a 4-point Likert scale: 1.00–1.49 = Very Low; 1.50–2.49 = Low; 2.50–3.49 = Moderate and 3.50–4.00 = High. Mean values were interpreted according to these intervals to determine the overall level of peer influence and substance addiction.

For Research Question 2, which investigated the extent to which peer influence predicts substance addiction, simple linear regression analysis was employed. The coefficient of determination (R^2) was used to determine the proportion of variance in substance addiction explained by peer influence. The standardised beta coefficient (β) was used to assess the strength and direction of the predictive relationship. Statistical significance was determined using the F-ratio and associated p-value.

For Research Question 3, which examined gender differences in substance addiction, an independent samples t-test was conducted to compare mean substance addiction scores between male and female students. Statistical significance was determined using the t-value and associated p-value. All statistical decisions were made at $p < .05$.

Results

Table 1: Descriptive Statistics: on Level of Peer Influence and Substance Abuse among Secondary School Students in Edo State (N = 412)

Variable	M	SD
Peer Influence	3.42	0.76
Substance Addiction	2.98	0.81

$p < .001$.

The descriptive analysis showed that the mean score for peer influence was 3.42 (SD = 0.76), indicating that respondents perceived a moderate to high level of peer influence. The mean score for substance addiction was slightly lower at 2.98 (SD = 0.81), suggesting a moderate level of substance-related behaviour among the respondents. This finding suggests that higher levels of peer influence are associated with higher tendencies toward substance addiction among the respondents.

Table 2: Linear Regression Analysis Predicting Substance Addiction from Peer Influence

Predictor	B	SE B	β	t	p
(Constant)	0.87	0.21		4.14	< .001
Peer Influence	0.54	0.04	.47	12.63	< .001

The results of the regression analysis indicated that peer influence significantly predicted substance addiction among the respondents. The constant (intercept) was 0.87 (SE = 0.21, $t = 4.14$, $p < .001$), representing the expected level of substance addiction when peer influence is zero. The unstandardised coefficient for peer influence was $B = 0.54$ (SE = 0.04), with a standardised coefficient of $\beta = 0.47$. This indicates that for every one-unit increase in peer influence, substance addiction is expected to increase by 0.54 units, holding other factors constant. The relationship was statistically significant ($t = 12.63$, $p < .001$), suggesting that peer influence is a strong and meaningful predictor of substance addiction among the respondents.

Model Summary

R	R ²	Adjusted R ²	F	p
.61	.37	.37	159.56	< .001

Note. Dependent variable: Substance Addiction.

The regression model examining the effect of peer influence on substance addiction was statistically significant. The model produced a multiple correlation coefficient of $R = 0.61$, indicating a strong relationship between peer influence and substance addiction. The coefficient of determination, $R^2 = 0.37$, showed that approximately 37% of the variance in substance addiction among respondents could be explained by peer influence. The adjusted R^2 was also 0.37, suggesting that the model's explanatory power remains robust after accounting for the number of predictors. The overall model was statistically significant ($F(1, N) = 159.56$, $p < .001$), indicating that peer influence is a significant predictor of substance addiction.

Table 3: Gender Differences in Substance Addiction Scores

Gender	N	M	SD	t	p
Male	214	3.08	0.79	2.31	.021
Female	198	2.87	0.82		

An independent samples t-test was conducted to examine gender differences in substance addiction among respondents. Male students ($N = 214$) reported a slightly higher mean score for substance addiction ($M = 3.08$, $SD = 0.79$) compared to female students ($N = 198$; $M = 2.87$, $SD = 0.82$). The difference was statistically significant, $t(410) = 2.31$, $p = .021$, indicating that male students were more likely to engage in substance-related behaviours than their female counterparts.

Discussion

Level of Peer Influence and Substance Addiction

The descriptive findings of the study revealed that secondary school students in Edo State perceived a moderate to high level of peer influence and a moderate level of substance-related behaviour. This suggests that peer influence is relatively strong among the respondents and may contribute to involvement in substance-related behaviours. This finding agrees with the study of Trucco (2020), who reported that peer influence is a strong proximal predictor of adolescent substance use, particularly in the initiation and continuation of substance use among adolescents. It also aligns with Sawyer *et al.* (2018), who observed that adolescents are highly vulnerable to peer pressure due to developmental characteristics such as identity formation and the need for social acceptance, which increase the likelihood of engaging in risky behaviours, including substance use.

Furthermore, the finding is consistent with Bandura's (1977) Social Learning Theory, which posits that behaviour is learned through observation, imitation, and reinforcement within social contexts. In this regard, students exposed to peers who engage in substance use are more likely to replicate such behaviours, thereby reinforcing the relationship observed in the present study.

However, the finding is partially at variance with the position of Schulenberg *et al.* (2019), who argued that although peer influence is a significant predictor of adolescent substance use, its effect is often moderated by other protective factors such as parental monitoring, school connectedness, and self-regulation. This implies that while

peer influence is strong in the present study, it may not independently account for all variations in substance-related behaviour among students.

Relationship between peer influence and substance addiction among secondary school students in Edo State

The finding revealed that peer influence significantly predicts substance addiction among secondary school students in Edo State. This implies that as peer influence increases, substance-related behaviour also increases among students. This finding is consistent with the descriptive result, which showed relatively high levels of peer influence alongside moderate levels of substance addiction, suggesting a meaningful relationship between the two variables.

The finding aligns with the neurodevelopmental literature on adolescent substance use, which explains that adolescents are particularly vulnerable to external social influences due to the ongoing maturation of the prefrontal cortex and heightened reward sensitivity (Casey *et al.*, 2019; Dahl *et al.*, 2018; Steinberg, 2017). This developmental imbalance makes adolescents more responsive to peer approval and social rewards, thereby increasing susceptibility to peer-driven behaviours such as substance use.

The result also aligns with Volkow and Blanco (2021) and Silverman *et al.* (2016), who reported that the adolescent brain exhibits heightened activation in reward-related neural circuits, making pleasurable and socially reinforced behaviours more compelling. In peer contexts where substance use is normalised, such neurobiological sensitivity increases the likelihood of experimentation and continued use. Similarly, Braams *et al.* (2015) found that adolescents show stronger neural responses to risk-related and reward-based cues compared to adults, reinforcing the observed predictive relationship between peer influence and substance addiction in the present study.

Furthermore, the finding supports Grey and Squeglia (2018), who established that early and repeated exposure to substance-using peers increases the probability of transitioning from experimental use to substance use disorders. The significant predictive strength observed in this study ($\beta = 0.47$) suggests that peer influence is not merely a background factor but a central determinant of adolescent substance behaviour.

The result is also in agreement with Bandura's Social Learning Theory (1977), which posits that individuals learn behaviours through observation, imitation, and reinforcement. In school environments where peers engage in substance use and receive social acceptance or status, other students are likely to imitate such behaviours. This is further supported by Odukoya *et al.* (2021), who reported that substance use is increasingly normalised within adolescent peer groups in southern Nigeria, where it is often associated with maturity, social belonging, and identity formation.

Additionally, the finding corroborates the position of the National Institute on Substance Abuse (NIDA, 2020), which emphasises that social environments, particularly peer networks, play a crucial role in the initiation and maintenance of substance use among adolescents. The significant explanatory power of the model ($R^2 = 0.37$) further reinforces the importance of peer influence as a major psychosocial determinant of substance addiction.

However, the finding may be partially consistent with studies that emphasise the role of other moderating factors such as parental supervision, socioeconomic conditions, and school connectedness. While peer influence explains a substantial proportion of variance in substance addiction, it does not account for all influencing factors, suggesting that adolescent substance use is multifactorial in nature.

Peer influence and substance addiction among secondary school students in Edo State based on gender

The findings of the present study revealed a significant gender difference in substance addiction among secondary school students in Edo State, with male students exhibiting higher levels of substance-related behaviour than female students. This finding aligns with Brechwald and Prinstein (2019), who explained that peer influence operates through mechanisms such as social modelling, perceived norms, and reinforcement, which are often more strongly expressed in male peer groups. These mechanisms tend to encourage risk-taking and substance use among male adolescents.

It is also aligned with Allen *et al.* (2020), who reported that adolescents are more likely to engage in substance use when it enhances social acceptance and peer inclusion. This tendency is often more pronounced among males,

who are more likely to engage in behaviours that reinforce group identity and social status through risk-taking activities, including substance use. Furthermore, the finding agrees with Trucco (2020), who found that affiliation with substance-using peers increases both the initiation and continuation of substance use among adolescents. This supports the present study, suggesting that male students may have greater exposure to deviant peer networks that encourage substance use.

The result also agrees with Doku *et al.* (2022), who reported that environmental and structural factors such as urbanisation, unemployment, and social media exposure interact with peer influence to increase adolescents' vulnerability to substance use. These factors may place male adolescents at greater risk due to higher mobility and exposure to peer groups where substance use is normalised.

Conclusion

This study established that peer influence is a significant predictor of substance addiction among secondary school students in Edo State. The findings revealed that students who are exposed to strong peer influence are more likely to engage in substance-related behaviours, indicating that peer networks play a central role in shaping adolescent substance use patterns. The study further showed that substance addiction among students is at a moderate level, suggesting that while not excessively high, it is sufficiently prevalent to warrant concern. In addition, gender differences were observed, with male students exhibiting higher levels of substance-related behaviour than female students. Overall, the study concludes that peer influence is a major determinant of adolescent substance addiction in secondary schools in Edo State.

Recommendations

Based on the findings of the study, the following recommendations are made:

1. Schools should implement structured peer education and peer mentoring programmes that promote positive role modelling and discourage substance use among students.
2. School authorities should design and intensify social norm campaigns that correct students' misperceptions about the prevalence and acceptability of substance use.
3. School counsellors and teachers should be trained to identify and monitor high-risk peer groups and provide early intervention for students exposed to negative peer influence.
4. Government and education stakeholders should strengthen school-based substance prevention programmes that focus on building students' resistance skills against peer pressure.
5. Special attention should be given to male students, who were found to be more vulnerable to substance-related behaviours, through targeted counselling and behavioural intervention programmes.
6. Parents and guardians should be encouraged to enhance communication and monitoring of adolescents' peer relationships to reduce exposure to substance-using peer networks.

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